

contacting said sample with a pore assembly comprising a number of pore-subunit polypeptides sufficient to form a pore, wherein at least one of said pore-subunit polypeptides is a modified pore-subunit polypeptide comprising a pore-subunit polypeptide covalently linked to a sensing moiety; and

detecting an electrical current through at least a first channel, wherein a modulation in current compared to a current measurement in a control sample lacking said analyte indicates the presence of said analyte in said sample.

REMARKS

I. Amendment

Claim 32, as originally filed, incorporated the claim elements of claim 25, a non-elected claim. Claim 32 has therefore been amended to include the claim elements of claim 25. This amendment is supported by original claim 25 and therefore does not constitute new matter. Further, this amendment does not narrow the claim in any way. A marked up version of claim 32, showing the changes made by the present amendment, is attached hereto.

II. Response to Restriction Requirement

In response to the restriction requirement, Applicants elect, Group IV, claims 32-38, with traverse

The Examiner has required that the claims be restricted to one of the following groups:

Group I, Claims 1- 23, directed to a modified pore-subunit polypeptide;

Group II, Claim 24, directed to a staphylococcal alpha hemolysin pore-subunit polypeptide;

Group III, Claims 25-31, directed to an oligomeric pore assembly;

Group IV, Claims 32-38, directed to a method of detecting an analyte;

Group V, Claim 39, directed to a method of detecting an unknown analyte;

Group VI, Claims 40-41, directed to a method of detecting a change in a biological or chemical constituent; and

Group VII, Claims 42-43, directed to a method of detecting a change in the physical environment.

Even if inventions are independent or distinct as claimed, there must be a serious burden on the Examiner if restriction is to be required. The Examiner has not met that burden to justify a seven-way restriction requirement.

If anything, the restriction requirement should be limited to two groups; claims 1-31, directed to compositions, and claims 32-43, directed to analytical methods using the compositions.

For example, groups 32-43 are all directed to analytical methods based on the current response of a pore assembly according to claims 1-31. The fact that some of the features of claims 32-43 are different from each other, or that they have slightly different modes of operation from each other does justify they be restricted. Claims 32-43 are so closely related that they should be amenable to a common search. Applicants should not have to file four different applications to cover the subject matter of groups IV-VII.

Applicants therefore respectfully request that the Restriction Requirement be withdrawn.

Based on the above discussion, Applicants provisionally elect to prosecute groups IV-VII together.

The Examiner is invited to contact the undersigned patent agent at 713-787-1558 with any comments relating to the referenced patent application.

Respectfully submitted,



Raymond Reese

Reg. No. 47,891

Agent for Assignee

THE TEXAS A&M UNIVERSITY SYSTEM

HOWREY SIMON ARNOLD & WHITE, LLP
750 Bering Drive
Houston, Texas 77057-2198
(713) 787-1400

Date: Jan. 24, 2002

Marked up version of amended claim showing changes made.

32. (Amended) A method of detecting the presence of an analyte in a sample, the method comprising:

contacting said sample with [the] a pore assembly [of claim 25] comprising a number of pore-subunit polypeptides sufficient to form a pore, wherein at least one of said pore-subunit polypeptides is a modified pore-subunit polypeptide comprising a pore-subunit polypeptide covalently linked to a sensing moiety; and

detecting an electrical current through at least a first channel, wherein a modulation in current compared to a current measurement in a control sample lacking said analyte indicates the presence of said analyte in said sample.